Best Practices in E government: A review of Some Innovative Models Proposed in Different Countries

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Abstract---Governments all around the world are heavily investing towards the implementation of e government to improve services to citizens and reduce costs. With the help of ICT, governments can increase efficiency of their operations and can carry out their administrative operations smoothly. Keeping this fact in mind we thought to carry out research identifying the models for international best practices in e government. This paper offers a comparative study of three models and frameworks concerning the development of best practices in e government. The paper reviews each model in detail and provides a view of how each model can help towards the development of best practice in any e government initiative.

Keywords- Best Practices, Citizens, E governance Models, Services

I. INTRODUCTION

The advancement in Information and communication technology (ICT) has affected our relation with people, businesses and more recently with governments [1]. The introduction of ICT's has changed the way governments interact with its citizens and has led to development of a world phenomenon called e government. E-government involves the use of the ICT to facilitate an efficient, speedy and transparent process of providing information to the public and to carry out administration activities. The definition of E government according to World Bank is [2]:

“E-government refers to the use by government agencies of information technologies like wide area network, the internet and mobile computing that have the ability to transform relations with citizens, businesses, and other arms of government”

E-government uses information and communication technologies to promote more efficient and effective government, facilitate more accessible government services, allow greater public access to information and make government more accountable to citizens. The modern information technology services like the internet, mobile communication, wireless devices and a mix of other technologies are used to implement e government solutions. The main aim of e government is to provide an easier access to information and services by using the modern technologies as well as facilitate better communication between different arms of the government. There are two extremely important criteria’s for a successful e government [3]:

A. 24 x 7 Availability: The E government services and transactions have to be available 24 hours a day, 7 days a week. A user should be able to access an e government service any time he wishes. This enables user to access services outside office hours.

B. Accessibility: Any e government initiative is critically dependent on accessibility of its services. If a particular service is not available to its intended target user, it will not be successful and will ultimately fail.

This paper is an in-depth exploration of three innovative approaches aimed towards making of an e government initiative into a best practice. The paper also tries to find common points in all the three models and as well determines the focal point of each of the models. The rest of the paper is organized in four sections: First, an introduction to the stages of e governance will be presented. Secondly, a brief overview of a best practice will be given. Next, the three models will be explained in detail. And at last a conclusion of the study and future work will be proposed.

II. STAGES OF E GOVERNANCE

In order to accomplish e government initiatives, there must be a phased approach applied to the infrastructure development which transforms an initial e government initiative into final desired service [4]. E governments all around the world have different objectives and follow different models for e government development. The advantage of having a phased approach is that the success of each e government initiative can be calculated and the possible errors and pitfalls of the initiative can be rectified. Generally speaking, there are four stages of e government which in most cases follow each other:
II. WHAT'S A BEST PRACTICE?

A best practice can be defined as an increased efficiency of the system for dissemination of the information, delivery of services and assisting in public decision making. A best practice is a standardized technique, method or a process that has proven themselves to accomplish tasks over a period of time. The UN defines a best practice as successful initiatives towards improving people’s standard of life. A best practice originates as a result of effective partnership between public and private entities and is socially and culturally self-sufficient. Governments all around the world are striving to deliver high-quality services with the help of already established best practices in both public and private sectors [5].

There are six key similarities among best practices as identified by Ministry of Information Technology, Government of India:

- Constant focus on improvement in quality, costs and delivery of the e government services.
- Closer interaction with the citizens
- Closer interaction within the service providers
- Increased and effective use of technology.
- Greater flexibility and Less hierarchical organization
- Promoting continuous learning, teamwork, participation and flexibility

IV. E GOVERNMENT BEST PRACTICES MODELS

MODEL -1

Owen A., Johnson and Stephen F. King in 2005 demonstrated the application of Variety and best practice (VBP) model using the basic software engineering theory and techniques to identify best practices in local e governments. They argued that the software services that can be embedded into generic software solutions can be used for a large variety of complex e government operations. They proposed their model on the founding principle of the object-oriented systems called Inheritance. Inheritance can be defined as the process in which one sub operation inherits the characteristics of the parent operation. They said that any process or operation can be shown visually with the help of Unified modelling language (UML). The UML offers a graphical representation of any operation.

The construction of Variety and best practice (VBP) model was based on four points:

1. Any process or operation must provide a logical and meaningful outcome to customers, citizens and can be graphically shown with the help of use cases.
2. An operation or process can be shown as a part of some other operation and must provide a meaningful outcome.
3. The proposed best practice can be represented in the UML form. This enables the best practice to be associated with other operations of the same kind.
4. The activities that take place during the completion of an operation or process can be represented in the form of UML activity diagrams, and inheritance can be applied to common operations and best practices.

The authors demonstrated the application of VBP model on the BASE.GOV project of the UK government. They used the use case diagram for showing the services provided by the local authority and UML activity diagram to model the best practice. The services provided by the local government can be represented in a single-use case diagram. A citizen can demand any type of service from the local government depending on his needs, and the VBP model can provide the view of best practices provided by the authorities. The model showed that the best practice can be modeled at different levels of operation and the level at which best practice can be implemented.

MODEL – 2

The second model in consideration was proposed by Ali M. Al-Khoury in 2011, which focused on developing simple and effective tools and strategies for managing, understanding and executing e-government initiatives. The model proposed is called "Citizen inclusive vision realized through ID card Integrated Delivery of E-government Applications" simply referred to as "CIVIC IDEA." The model was concerned with the realization of e-government initiatives in UAE. A figure showing the overall ecosystem of CIVIC IDEA is given at the end of this paper.

The CIVIC IDEA model proposed that a strategy for e-governance and the right execution of the strategy are equally important for the delivery of e-government services. The inference taken from the CIVIC IDEA concept is that a standardized best practice can act as a template for e-government services provided at the local and central level of e-government. The CIVIC IDEA strongly advocates the need to use standardized technologies complying with international standards and their interoperability between different systems. There are four stages of CIVIC IDEA realization:

1. **Enable**: In this phase, the basic foundation for the service is laid.

2. **Enhance**: This phase used to develop standards, infrastructure for the service.

3. **Establish**: This phase deals with increasing the demand of the service and also to extend support to other systems.

4. **Expansion**: The service is now expanded to reach maximum coverage.

The proposed framework is developed to aid in overall strategy and focus on certain best-practice development in an e-government initiative.

MODEL – 3

The third model under review was proposed by Abdelbaset Rabaiah and Eddy Vandijck in 2009. This model is the result of review of e-government strategies of 20 countries in addition to European Union. The paper proposed a generic framework that can be adopted by any e-government strategy. They argued that the framework should act as a bridge between local and central government. The framework proposes that there can be strategies developed for individual services to be provided to the citizens. The framework is called strategic framework of e-government and is divided into modules, and each module represents the component of an e-government. These modules are:

- Vision
- Strategic objectives
- Users
- Delivery modes
- Guiding principles
- Channels
- Priority area
- Major initiatives
- Infrastructure
- Organisation
- Guidelines

The framework is further divided into two parts:

1. **Front Office**: Deals with following modules of the framework; Vision, Strategic objectives, Users, Delivery modes, Guiding principles, Channels,

2. **Back Office**: Deals with the remaining modules of; Priority area, Major initiatives, Infrastructure, Organisation, Guidelines.

The framework is based on best practices in e-government, formulated with the study of e-government strategies of 20 countries and European Union.
V. CONCLUSION & FUTURE WORK

The above discussed models demonstrated different models which can be applied to numerous areas of e governance in different countries. The striking thing about the three models is that each model was applied to one area of e governance but has flexibility of being extended to other areas of governance. The summary of the models is given in the following table:

<table>
<thead>
<tr>
<th>Summary</th>
<th>Information Flow</th>
<th>Countries Referred</th>
</tr>
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<tbody>
<tr>
<td><strong>MODEL - 1</strong>&lt;br&gt;• Called as &quot;Variety and best practice (VBP) model&quot;.  • Based on software engineering concepts of UML and Use cases.  • Each operation can be viewed as a sub part of other operation.  • Each operation must provide some meaningful output.</td>
<td>Each sub operation Receives input from some other operation</td>
<td>United Kingdom</td>
</tr>
<tr>
<td><strong>MODEL – 2</strong>&lt;br&gt;• Called as “CIVIC IDEA”  • Citizen Centric Model  • Simple and effective tools for executing e government strategies  • A standardised best practice can act as a template for other e government services  • Using standardised technology which are operational with other systems</td>
<td>Hierarchal model; completion of one stage provides a way for next step</td>
<td>United Arab Emirates</td>
</tr>
<tr>
<td><strong>MODEL - 3</strong>&lt;br&gt;• Called as &quot;Strategic framework of e-government&quot;  • Can act as a Generic framework for any e government strategy  • Individual service to the citizen  • Subdivided into Front office and back office which contain framework modules</td>
<td>Two way communication at each module of the framework</td>
<td>European Union &amp; Australia; Belgium; Denmark; Austria; Japan; Finland; France; Canada; Germany; Korea; Singapore; Jordan; Egypt; UK; India; New Zealand; USA; Malaysia; Brazil</td>
</tr>
</tbody>
</table>

**TABLE 1: Summary of the Discussed Models**

The success of e government requires the support of its citizens, implementers and researchers as well. While this article presented an in depth exploration of three models for best practices in e government, there is still a need for more research towards the best practices in e government. The rich material available on e governance provides a research challenge for more extensive reviews and proposals.
REFERENCES


Fig 2. CIVIC IDEA Ecosystem (Ali M. Al-Khouri "An Innovative Approach for E-Government Transformation")